

Annual Report of Activity

The Elizabeth River Restoration Trust



Submitted To:

VA Department of Environmental Quality and US Army Corps of Engineers

Submitted By:

The Elizabeth River Restoration Trust

October 31, 2005

Introduction:

This report presents mitigation projects completed or in the process of being completed by The Elizabeth River Restoration Trust (ERRT) in its first year of operation as an in-lieu fee fund to mitigate for environmental impacts in the Elizabeth River watershed. The ERRT, VA Department of Environmental Quality (VA DEQ), and US Army Corps of Engineers, Norfolk District (USACE) in 2004 finalized an Elizabeth River Restoration Trust Operating Agreement. As outlined under Program Operations, part C, Implementation and Compliance, of that agreement, the Trust "shall provide the Norfolk District and VA DEQ with a project statement on an annual basis that identifies project expenses for the year, and justifies project selection based on consistency with goals and priorities in the Elizabeth River Project's Watershed Action Plan."

This report represents the first report to VA DEQ and US Corps on activities of ERRT from the date of the agreement, May 19, 2004, to September 30, 2005. The ERRT fiscal year is October 1 to September 30. The first funds were received June 7, 2004.

Contributions Received:

One permitted project has contributed to ERRT. The project and its impacts were associated with the development of a private port facility in the Mainstem of the Elizabeth River. The project resulted in impacts to 189 acres of river bottom from the dredging of 10.3 million cubic yards and filling of 2.07 acres of open water and benthic habitat. For these impacts, the ERRT received \$5 million for the direct dredging impacts and \$310,500 for the filling impacts, totaling \$5,310,500. Types of habitat impacts, acres impacted and contributions received from May 7, 2004 to October 1, 2005 are shown in Table 1.

TABLE 1: Acres impacted and contributions by types of habitat impacts

Type of habitat impacts	Acres impacted	Contributions
Dredging of subaqueous habitat	189	\$5,000,000
Filling of open water and benthic habitat	2.07	\$310,500

A) Mitigation Projects:

Mitigation projects that are underway or have been completed include the creation of a 13 acre 2-dimensional (2D) oyster reef at the mouth of Scotts Creek (completed); and investigations of contaminated sediments at Money Point (underway) and Paradise Creek (completed). A site investigation phase preceded the selection of these sites. The ERRT provided the Corps of Engineers and VA Department of Environmental Quality with a detailed scope of work for all the projects detailed in this report and received project approval before expending any funds on these projects.

1) Sediment Remediation Mitigation Projects:

Sediment remediation is the No. 1 priority goal identified in the Elizabeth River Watershed Action Plan. The majority of the focus of ERRT activities for the report period were to pursue this goal.

a. Site Identification and establishment of Technical Advisory Committee: To determine the most feasible sites for both sediment remediation and oyster reef restoration, ERRT first contracted with The Elizabeth River Project to complete preliminary site investigations and establish an infrastructure for technical review. A compilation of existing data was performed regarding Money Point and other potential remediation sites. A preliminary field investigation to determine potential roadblocks to Money Point remediation included contacting all landowners along Money Point to discuss potential upland recontamination issues, potential improvements to prevent recontamination, and navigation concerns which might impact remediation plans. Communications were also established with the South Norfolk community, the City of Chesapeake and regulatory agencies regarding a potential Money Point remediation cleanup. In addition, a Technical Advisory Committee to ERRT was formed (chaired by Dr. Joseph Rule, Associate Dean of Science at Old Dominion University). The committee reviewed initial contamination data and confirmed recommendation of Money Point as the site to conduct a focused feasibility study.

b. Money Point Investigation: Money Point, a bend in the central portion of the Southern Branch of the Elizabeth River, was identified as the most promising focus for sediment remediation for ERRT mitigation funds received for the port facility impacts. Offshore of Money Point, studies indicate there are 35 acres of some of the highest known levels of polycyclic aromatic hydrocarbons (PAH) contamination in the Chesapeake Bay which are correlated with high rates of liver cancer in mummichog fish. To develop a cleanup plan for the area, ERRT needed to contract with an environmental consultant to conduct a study to determine which cleanup options are feasibility at Money Point.

In order to obtain this needed information ERRT has contracted with Elizabeth River Project which developed a scope of work, request for proposals, and hired Science Applications International Corporation (SAIC) to begin a feasibility study focused on remediation of sediments at Money Point. SAIC has conducted extensive sampling/survey at Money Point which include the following: side-scanning sonar, bathymetry mapping, sediment



SAIC staff lowering the sediment-profile image equipment at Money Point.

profile imaging, sediment coring, and analysis for contaminants from the sediment cores. At present, SAIC has completed all field efforts for sampling and results will be presented at the December meeting of the Technical Advisory Committee to the Trust. Information from this study will be used to conduct treatability tests and determine engineering characteristics of the sediments.

It is anticipated that the feasibility study will be completed by September 29, 2006 (ERP currently has SAIC under contract for \$330,904) and the project will move into detail design/construction.

In addition to overseeing the management of the feasibility study, ERP has also been working with landowners and diverse interests to address potential sources of re-contamination from uplands. A Money Point revitalization task force team has been meeting for the last year to develop a comprehensive plan for the revitalization and restoration of both the uplands and contaminated sediment. The University of Virginia's Institute for Environmental Negotiation has been facilitating this process to identify initial community concerns and initial roadblocks to carrying out this project.

- c. Paradise Creek Investigation:** The restoration of this 2.9 square mile sub-watershed is a priority of the Watershed Action Plan as a model for restoring the river – one creek at a time. Paradise Creek, a Portsmouth tributary to the Southern Branch of the Elizabeth River, was the focus of a minor level investigation for contaminated sediments. Past studies had indicated potential PCB contamination in a hotspot at Paradise Creek near the former Peck Iron and Metal site, but sampling was



Elizabeth River staff sampling for PCBs at Paradise Creek.

not extensive enough to determine remediation needs. ERRT contracted with ERP and devoted a limited amount of effort and funds (less than \$4,000) to sample the hotspot on Paradise Creek to determine if a cost-effective removal effort may be feasible in conjunction with a nearby Navy remediation effort on Paradise Creek. ERP coordinated with scientists from US Fish and Wildlife Service and NOAA, and samples were collected at no cost to the Trust. ERP contracted with Virginia Institute of Marine Science (VIMS) to analyze the sediment samples. Results from the sampling showed low levels of PCB contamination (≤ 1.3 ppm) (see attached report for details).

2) Oyster Reef Mitigation Project:

ERRT received mitigation funds to construct a 3-dimensional (3D) oyster reef and seed it with disease tolerant oysters (DEBY) to mitigate for 2 acres of open water and subaqueous impact. However, creation of a 13-acre 2-D reef at the mouth of Scotts Creek was reviewed and endorsed by the Technical Advisory Committee to ERRT and technical advisors to Virginia Marine Resource Commissions and Chesapeake Bay Foundation (CBF), and the reef was accordingly

created in summer 2005. The following lines of evidence were used to support the placement of a 2-D reef at Scott's Creek.

- The 2D reef will mitigate for impacts at 6.5:1, a higher ratio than the 1:1 outlined in the permit.
- Current reefs within the Elizabeth River system are small in size (<1 acres) and largely isolated from one another. The 13-acre 2D reef would be the largest oyster reef in the watershed.
- The large reef will be centrally located in the watershed (near the confluence of the Eastern, Western, and Southern Branches) giving spat a large surface area to settle on.
- The port project impacted one of the largest remaining 2D reefs within the system. 2D is closer in-kind mitigation compared to 3D.
- Spat set and survival data collected on nearby reefs is encouraging compared to other reefs in the Elizabeth.
- Site of proposed reef once supported a historic oyster reef.



The 13 acre, 2-D oyster reef at the mouth of Scotts Creek construction was completed on June 1, 2005 and the seeding of 375,000 disease tolerant oysters (DEBY) was completed on by June 15, 2005. In addition, VMRC is contracted to conduct annual monitoring of the reef for the next five years. VMRC will provide a data report on an annual basis.

B) Projects Funded with Interest Earned *(authorized by ERRT Board)*

1) Sediment remediation investigation, Wycoff and Republic Sites.

Wycoff Creosote and Pipe was a creosote wood treatment plant that operated on the property to the north of the Jordan Bridge from the early 1900's to around 1930's. Past data from this site has indicated that the sediments offshore are highly contaminated. Republic was also a creosote wood treatment plant just north of Money Point that operated until the late 1960's and one data point from this area indicated high levels of contaminated sediments. Investment interested acquired by ERRT were used to collect samples and have them analyzed to determine if PAH contamination was high in the sediments adjacent to these properties. Under contract to ERRT for project management, the Elizabeth River Project coordinated with VA DEQ Tidewater office who provided in-kind, a boat and sampling equipment, to help collect the samples. ERP then contracted with VIMS to analyze the sediments. Currently, ERP is working with VIMS to complete the final data report, however preliminary results suggest that both sites contain extremely high levels of PAH contamination (see draft report attached).

Elizabeth River Restoration Trust

Project Expenses

Project Period - June 1, 2004 through September 30, 2005 (first funds received June 7, 2004)

A. Mitigation Projects

Expenses

1) Sediment Remediation

a. Money Point Investigation, Contracted to Elizabeth River Project

Money Point Feasibility Study (sub-contracted to SAIC)	\$160,855
Site Identification, Planning & Project Management (1.75 FTE)	94,813
Supplies, utilities, copying, meetings (Tech Advisory etc), computer equipment, training	19,486
Legal and accounting fees	<u>6,000</u>
<i>Subtotal Money Point</i>	<u>\$281,154</u>

b. Paradise Creek Investigation, Contracted to Elizabeth River Project

Sub-contract to VIMS - 17 samples for PCB	<u>3,842</u>
<i>Subtotal Paradise Creek</i>	<u>3,842</u>

Total Sediment Remediation	\$284,996
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2. Oyster Reef Restoration

a. Scotts Creek Oyster Reef, Contract to Elizabeth River Project

Sub-contract VMRC for oyster construction	285,025
Personnel - site investigation and project management	4,139
Other Direct	<u>250</u>
<i>Subtotal Oyster reef</i>	<u>289,414</u>

Total Oyster Reef Restoration	\$289,414
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B. Projects Funded with Interest Earned

Contract to Elizabeth River Project for sampling at Wycoff/Republic	<u>\$15,000</u>
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Total Expenses of Interest Earned	<u>\$15,000</u>
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Total Expenses for June 1, 2004 thru September 30, 2005	\$589,410
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